


I hereby certify that on October 7, 2002, which is the date I am signing this certificate, I am depositing this correspondence the United States Postal Service, first class mail, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

  
Deborah A. Purnell

# PATENT

Client/Matter No. 350013/65

Applicant: Ian Baird-Smith, et al.

Serial No.: 09/445,043

Filed: March 20, 2000

Title: A CONTAINER CLOSURE

Examiner: R. Hylton

Group Art Unit: 3727

Confirmation No. 9395

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box RESPONSES – NO FEE

Commissioner for Patents and Trademarks

Washington, D.C. 20231-0001

RECEIVED

OCT 21 2002

TECHNOLOGY CENTER R3700

### DECLARATION

Sir:

I, Frederick Beverley Morland Page, declare as follows:

1. I reside at Oak Shade, 121 Nottingham Road, Ravenshead, Nottingham NG15 9H5.
2. I am a Chartered Mechanical Engineer.
3. I obtained an honours degree followed by a Master of Arts in Mechanical Sciences from St. John's College, Cambridge University in 1957 and 1961, respectively.
4. I have worked in the Engineering Industry since 1961. From 1973 to 1998, I worked in the metal packaging industry.
5. In 1998, I set up my own consultancy business known as "Bev Page-Packaging Consultant".
6. In 1999, I was appointed part time Technical Consultant to the Metal Packaging Manufacturers Association, Maidenhead, UK.
7. In 2001, the book "Metal Packaging, An Introduction" of which I am the author, was published by Pira International Ltd.
8. I have been asked to review the specification of U.S. patent application no. 09/445,043 originating from International application no. PCT/IB98/00825. The application relates to a container assembly comprising an open ended container and a closure system therefor. The assembly includes, amongst other things a flexible

membrane, that acts on the resiliently deformable member forming part of a rigid closure. I have read this application and reviewed the drawings filed therein.

9. A characterising feature of the flexible membrane is that it is "pre-stressed". In my opinion, there are numerous references in the application as filed to the flexible member being pre-stressed.

10. The term "stressed" as used in this application means "compressed" or acted on by a force that tends to change the dimensions of a material to cause a strain. Stress may be in a direction parallel or perpendicular to the plane of the member. In the present application, the stress is in a direction perpendicular to the plane of the flexible member.

11. The term "pre-stressed" therefore means compressed before or during the manufacture of the container assembly.

12. On page 4 of the amended International patent specification, the first statement of invention, which is the second full paragraph on page 4, states that "the resiliently deformable member pressing the flexible membrane against the container in the vicinity of the seal". This clearly shows that a force provided by the position of the rigid closure, and hence the resiliently deformable member relative to the flexible membrane, acts on the flexible membrane to compress the flexible membrane in a direction substantially at right angles to the plane of the flexible membrane. In other words, the flexible membrane is pre-stressed.

13. In the immediately following paragraph, it is stated that the resiliently deformable member reacts against the rigid closure to continuously and evenly reinforce the seal (because the flexible membrane is pre-stressed).

14. In the second statement of the invention, on page 5 lines 13 to 25, it is stated that "thereby causing the resiliently deformable member to press the flexible member against the container in the vicinity of the seal sufficiently to maintain the seal against pressures generated in the container on heating of its contents". For the reasons set out herein above, in paragraph 13, this also shows that the flexible member is pre-stressed.

15. On page 10 lines 18 to 23, it is stated that "thus on tightening of cap 12, resilient, annular member 24 presses membrane 11 into tight, sealing contact with flange 18. This seal is capable of withstanding pressures developed within the can 10 during cooking of food products therein". The reason that the seal is capable of withstanding such pressures is because the flexible membrane 11 is pre-stressed due to the fact that the cap bears down on the annular member and reacts against the resiliently deformable member.

16. In the immediately following paragraph beginning at line 25 it is stated that, during cooking, "the annular member 24 "continues to press down" on the seal between membrane 11 and flange 18 thereby providing additional reinforcing of the seal". This shows that the force applied to the flexible membrane 12 was applied before the cooking process began and therefor the flexible membrane 11 is pre-stressed.

17. Referring now to the last paragraph on page 11, it is stated that, before cooking of the food products, a cap is tightened onto the end of the can 10 "until annular member 24 presses membrane 11 against flange 18 with a predetermined pressure". In other words, in the assembly process of the container assembly, the process of putting the cap onto the can requires a torque to tighten the cap. This torque produces a predetermined pre-stress. The level of the pre-stress relates to the material properties of the resilient material.

18. The portions of the specification described herein above show that the feature of the flexible membrane being pre-stressed was contained within the application as originally filed.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of

Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued therefrom.

I declare under penalty of perjury that the foregoing is true and correct, that I have personal knowledge of same, and if called as a witness I could and would testimony competently thereto.

Date: 8 JULY 2002

Frederick Beverley Morland Page  
Frederick Beverley Morland Page